REMARKS

Status of the Claims

Claims 1-12 and new claims 13 and 14 are pending, with claims 1, 4, and 10 being independent. Without conceding the propriety of the rejections, claims 1, 4, and 10 have been amended to even more clearly recite and distinctly claim the invention. Support for the amendments may be found in the original claims as well as throughout the specification. New claims 13 and 14 have been added. Support for the new claims may be found throughout the specification including, for example, at page 12 – 13, paragraph [0049]. Therefore, no new matter has been added. Applicants note that these amendments are identical to those submitted in the Response after Final filed on June 9, 2003, which the Examiner considered but indicated would only be entered upon appeal.

Initially, Applicants would like to thank the Examiner for carefully considering Applicants amendments and arguments presented in the Response after Final. In the Advisory Action dated June 17, 2003, the Examiner stated that "... it is not clear if all non-synthetic lube base oils have an Oxiadator BN value in the presence of additives of less than 7." In response, Applicants provide herewith a declaration under 37 C.F.R. § 1.132 by John M. Rosenbaum, an expert in the field of lubricant base oils, demonstrating that all non-synthetic lubricating base oils do ***not*** have an Oxidator BN value of less than 7, and furthermore, all non-synthetic lubricating base oils do ***not*** have an Oxidator BN value of less than 10.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments, the following remarks, and the attached declaration.

The Present Invention

The present invention relates to a blend of lube base oils, which provides improved oxidation stability, including combined good Oxidator A and Oxidator BN stabilities. According to the present invention, it has been discovered that lube base oils can be prepared by blending lube base oils, which have poor Oxidator A stability but good Oxidator BN stability, with lube base oils, which have good Oxidator A stability but

poor Oxidator BN stability. It has been discovered that the Oxidator A and BN values do not blend linearly, and lube base oils made by blending these components have properties superior to either individual base oil. (page 8, paragraph [0037]; Table II, and page 13, paragraph [0050]).

In particular, the present invention relates to lube base oils comprising at least one ***synthetic lube base oil*** having an ***Oxidator A value*** in the absence of additives of ***less than about 1***. The lube base oil further comprises at least one percent of a ***non-synthetic lube base oil*** having an ***Oxidator BN value*** in the presence of additives of ***less than about 7***. The lube base oil of the present invention has an Oxidator A value in the absence of additives greater than about 1 and has an Oxidator BN value in the presence of additives of greater than about 7.

The present invention further relates to a lube base oil comprising at least one ***synthetic lube base oil*** having an ***Oxidator A value*** in the absence of additives of ***less than about 1*** and an ***Oxidator BN value*** in the presence of additives of ***greater than about 7***. The lube base oil further comprises a ***non-synthetic lube base oil*** having an ***Oxidator A value*** in the absence of additives of ***greater than about 5*** and an ***Oxidator BN value*** in the presence of additives of ***less than about 10***. The lube base oil of the present invention has an Oxidator A value in the absence of additives greater than about 5 and has an Oxidator BN value in the presence of additives of greater than about 10.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-12 remain rejected under 35 U.S.C. § 103(a) as being obvious over Berlowitz et al. (USPN 6,089,301) or Berlowitz et al. (USPN 6,165,949). Applicants maintain their traversal of this rejection.

Berlowitz '301 relates to a premium synthetic lubricating oil base stock. The synthetic lubricating oil base stock of Berlowitz is made by a Fischer Tropsch process. Berlowitz teaches that the base stock may be blended with one or more base stocks selected from the group consisting of (a) a hydrocarbonaceous base stock, (b) a synthetic base stock, and mixtures thereof. (Col. 2, lines 30-33). Berlowitz teaches that by hydrocarbonaceous it is meant a primarily hydrocarbon type base stock derived from a conventional mineral oil, shale oil, tar, coal liquefaction, and mineral oil derived slack wax. (Col. 5, lines 6-10). Berlowitz further teaches that typical examples of base stocks

to be blended with the base stock of the invention include base stocks derived from PAO, mineral oil, mineral oil slack wax hydroisomerate, and mixtures thereof. (Col. 2, lines 33-36). Berlowitz teaches and in the Examples demonstrates that Fischer-Tropsch derived base stocks are different, and most often superior to, lubricants formed of other base stocks. (Col. 2, lines 36-44).

Berlowitz '949 relates to a wear resistant lubricant comprising at least 95 weight % non-cyclic isoparaffins derived from waxy, paraffinic Fischer Tropsch synthesized hydrocarbons in admixture with an effective amount of an antiwear additive wherein the antiwear additive is at least one of a metal phosphate, a metal dithiophosphate, a metal dialkylthiophosphate, a metal thiocarbamate, a metal dithiocarbamate, an ethoxylated amine dialkyldithiophosphate and an ethoxylate amine dithiobenzoate. Berlowitz teaches that the amount of antiwear additive required to achieve a lubricant of a given level of wear resistance using a lubricant base stock derived from waxy Fischer Tropsch synthesized hydrocarbons is less than that required for a similar lubricating oil based on conventional petroleum oil. (Col. 1, lines 57-63). Berlowitz further teaches that the Fischer Tropsch synthesized base stocks comprising the antiwear additives demonstrate wear protection superior to a conventional mineral oil derived base stock (S150N) (Example 2, Tables 4 and 5).

It is respectfully submitted that in no way does Berlowitz '301 or Berlowitz '949 address the problem of achieving both good Oxidator A and Oxidator BN stability in lube base oils by providing a blend of a synthetic lube base oil, selected based on its Oxidator A value, and a non-synthetic lube base oil, selected based on its Oxidator BN value. In addition, in no way does Berlowitz teach or suggest that Fischer Tropsch products exhibit poor Oxidator A stability. Furthermore, in no way does Berlowitz teach or suggest blending a non-synthetic lube base oil having good Oxidator A stability and poor Oxidator BN stability with a synthetic lube base oil. Moreover, in no way does Berlowitz teach or suggest that a blend of a synthetic lube base oil having poor Oxidator A stability and a non-synthetic lube base oil having poor Oxidator BN stability provides a blended lube base oil with improved oxidation stability, including combined good Oxidator A and Oxidator BN stabilities. It is further respectfully submitted that in no way does Berlowitz teach or suggest that Oxidator A and BN values do not blend linearly, and lube base oils,

made by blending components chosen for their Oxidator A and Oxidator BN values, have properties superior to either individual base oil.

Accordingly, it is respectfully submitted that Berlowitz does not teach or suggest a lube base oil comprising a synthetic lube base oil having an Oxidator A value of less than about 1 and a non-synthetic lube base oil having an Oxidator BN value of less than about 7, wherein the lube base oil has an Oxidator A value of greater than 1 and an Oxidator BN value of greater than 7. It is further respectfully submitted that Berlowitz does not teach or suggest a lube base oil comprising a synthetic lube base oil having an Oxidator A value of less than about 1 and a non-synthetic lube base oil having an Oxidator BN value of less than about 10, wherein the lube base oil has an Oxidator A value of greater than 5 and an Oxidator BN value of greater than 10. Berlowitz does not teach or suggest selecting and blending synthetic and non-synthetic lube base oils in such a way as to provide a blended lube base oil with Oxidator A and Oxidator BN values superior to either individual base oil.

Applicants provide herewith a declaration under 37 C.F.R. § 1.132 by John M. Rosenbaum, an expert in the field of lubricant base oils, demonstrating that all non-synthetic lubricating base oils do ***not*** have an Oxidator BN value of less than 7, and furthermore, all non-synthetic lubricating base oils do ***not*** have an Oxidator BN value of less than 10.

Accordingly, it is respectfully submitted that neither Berlowitz '301 nor Berlowitz '949 teach or suggest all the claim limitations.

Claims 1-27 are also rejected under 35 USC §103(a) as being obvious over Wittenbrink (U.S. Patent No. 6,332,974). Applicants maintain their traversal of this rejection.

Wittenbrink relates to a wide-cut lubricant base stock made from a waxy Fischer-Tropsch synthesized hydrocarbon fraction. Wittenbrink teaches that the base stocks of the invention may be combined with conventional additive packages. Wittenbrink further teaches that the base stocks of the invention may be blended with another base stock selected from the group consisting of (i) a hydrocarbonaceous base stock, (ii) a synthetic base stock, and mixtures thereof. Wittenbrink teaches that the Fischer Tropsch base stocks of the invention will have superior properties to the blends. (Col. 4, lines 40-41).

Wittenbrink tests certain properties of the base stocks of the invention and compares these properties to those of a conventional lube oil fraction derived from petroleum oil. (Example 3). Wittenbrink concludes that the base stocks of the invention have superior properties to those of the conventional lubricating oil. (Example 3).

It is respectfully submitted that in no way does Wittenbrink address the problem of achieving both good Oxidator A and Oxidator BN stability in lube base oils. Wittenbrink does not teach or suggest providing a blend of a synthetic lube base oil, selected based on its Oxidator A value, and a non-synthetic lube base oil, selected based on its Oxidator BN value. In addition, in no way does Wittenbrink teach or suggest that Fischer Tropsch products exhibit poor Oxidator A stability. Furthermore, in no way does Wittenbrink teach or suggest blending a non-synthetic lube base oil having good Oxidator A stability and poor Oxidator BN stability with a synthetic lube base oil. Moreover, in no way does Wittenbrink teach or suggest that a blend of a synthetic lube base oil having poor Oxidator A stability and a non-synthetic lube base oil having poor Oxidator BN stability provides a blended lube base oil with improved oxidation stability, including combined good Oxidator A and Oxidator BN stabilities. It is further respectfully submitted that in no way does Wittenbrink teach or suggest that Oxidator A and BN values do not blend linearly, and lube base oils, made by blending components chosen for their Oxidator A and Oxidator BN values, have properties superior to either individual base oil.

Accordingly, it is respectfully submitted that Wittenbrink does not teach or suggest a lube base oil comprising a synthetic lube base oil having an Oxidator A value of less than about 1 and a non-synthetic lube base oil having an Oxidator BN value of less than about 7 wherein the lube base oil has an Oxidator A value of greater than 1 and an Oxidator BN value of greater than 7. It is further respectfully submitted that Wittenbrink does not teach or suggest a lube base oil comprising a synthetic lube base oil having an Oxidator A value of less than about 1 and a non-synthetic lube base oil having an Oxidator BN value of less than about 10, wherein the lube base oil has an Oxidator A value of greater than 5 and an Oxidator BN value of greater than 10. Wittenbrink does not teach or suggest selecting and blending synthetic and non-synthetic lube base oils in such a way as to provide a blended lube base oil with Oxidator A and Oxidator BN values superior to either individual base oil.

Applicants provide herewith a declaration under 37 C.F.R. § 1.132 by John M. Rosenbaum, an expert in the field of lubricant base oils, demonstrating that all non-synthetic lubricating base oils do ***not*** have an Oxidator BN value of less than 7, and furthermore, all non-synthetic lubricating base oils do ***not*** have an Oxidator BN value of less than 10.

Accordingly, it is respectfully submitted that Wittenbrink does not teach or suggest all the claim limitations.

Therefore, withdrawal of the obviousness rejections is respectfully requested.

Conclusion

Without conceding the propriety of the rejections, the claims have been amended, as provided above, to even more clearly recite and distinctly claim Applicants' invention and to pursue an early allowance. For the reasons noted above, the art of record does not disclose or suggest the inventive concept of the present invention as defined by the claims.

In view of the foregoing amendments and remarks and the attached declaration, reconsideration of the claims and allowance of the subject application is earnestly solicited. The Examiner is invited to contact the undersigned at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: M.L.M Hayworth

Melissa M. Hayworth
Registration No. 45,774

P.O. Box 1404
Alexandria, Virginia 22313-1404
(919) 941-9240

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